

Amendment to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listings of Claims

Claims 1-21 (canceled):

Claim 22 (original): A method of removing contaminants from the surface of a substrate, said method comprising:

directing a fluid comprising a reactant, capable of chemically removing contaminants from the surface of the substrate, onto the surface of the substrate, and irradiating the surface of the substrate with light to supply activation energy that causes a chemical reaction of the reactant with contaminants on the surface of the substrate, thereby chemically cleaning the substrate; and

jetting an aerosol comprising frozen gas particles onto the surface of the substrate to dislodge contaminants from the surface of the substrate, thereby physically cleaning the substrate,

wherein over the entire course of said irradiating the surface of the substrate and said jetting of the aerosol onto the surface of the substrate, said irradiating and said jetting are carried out in a separate manner that prevents the frozen particles of the aerosol from being evaporated by said light.

Claim 23 (original): The method of claim 22, wherein said chemical cleaning of the substrate is performed in a first cleaning chamber, and said physical cleaning of the substrate is performed in a second cleaning chamber discrete from and connected to said first cleaning chamber.

Claim 24 (original): The cleaning method of claim 23, wherein said irradiating the surface of the substrate with light comprises irradiating the surface of the substrate with infrared light in the first cleaning chamber.

Claim 25 (original): The cleaning method of claim 23, wherein said irradiating the surface of the substrate with light comprises irradiating the surface of the substrate with ultraviolet light in the first cleaning chamber.

Claim 26 (original): The cleaning method of claim 22, wherein the reactant comprises a gas selected from the group consisting of oxygen and ozone.

Claim 27 (original): The cleaning method of claim 22, wherein said chemical cleaning of the substrate and said physical cleaning of the substrate are performed in a common cleaning chamber, and said irradiating the surface of the substrate with light comprises directing a laser beam onto a region on the surface of the substrate separate from a region on the surface at which the aerosol is directed, whereby the laser beam and the aerosol impinge discrete areas of the substrate.

Claim 28 (original): The cleaning method of claim 22, wherein said jetting an aerosol comprising frozen gas particles comprises freezing gaseous particles of argon, whereupon the frozen argon particles agglomerate, and jetting the frozen agglomerated particles towards the surface of the substrate.

Claim 29 (original): The cleaning method of claim 22, wherein said jetting an aerosol comprises spraying the aerosol over a width at least as great as the maximum width of the substrate, and moving the substrate relative to the aerosol until the entire surface of the substrate has been impinged by the aerosol.